

### **REMARKS/ARGUMENTS**

Applicants would like to thank the Examiner for the careful consideration given the present application, and for the personal interviews conducted on December 14, 2005, and on January 11, 2006. The application has been carefully reviewed in light of the Office action and interviews, and amended as discussed at the interview.

Claims 1–20, 24–32, and 35–42 remain in this application. Claims 21–23 and 33–34 have been canceled. Claim 43 has been added.

The Examiner argued that the priority claim in the specification should be deleted, apparently because the priority document does not support all of the disclosed material in the application. Applicant is of the opinion that at least claims 36 and 43 are fully supported by the disclosure of the priority document. Accordingly, applicant requests that the Examiner remove this requirement.

A declaration by the inventors in this case has been provided, along with evidence that the acting attorney has, in his possession, a memorandum and an initial set of claims, both on computer disk with original modification dates (which are the original file creation dates), dated prior to January 9, 2001, said memo and claims capturing a description of the invention, at least according to claims 36 and 42, as provided by the inventors. This is evidence that the inventors, and their attorney, had, in their possession, the invention and its conception prior to the issue date of the Murphy patent. Accordingly, with respect to claims 36 and 42, Murphy can be considered prior art under §102 only as a §102(e) reference, and thus, as discussed in more detail below, cannot be used for an obviousness rejection

under §103(c). A hard copy of this memorandum and initial claims have been provided as an attachment to the declaration provided herewith.

Claims 1-20, 24-30, and 38-42 were rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement.

Claims 1, 27, and 38 have been amended using equivalent language, making the rejections moot.

Claims 36-37 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claim 36 has been amended, making the rejections moot.

Claim 35 was rejected under 35 U.S.C. §102(b) as being anticipated by Murphy et al. (U.S. 6,171,423). For the following reasons, the rejection is respectfully traversed.

As discussed at the first personal interview, claim 35 recites the step of "positioning said preform against the inner surface of said corresponding mold portions without a prior winding step". Murphy teaches that a winding step always precedes inserting the preform into a mold. Thus, claim 35 is patentable over the reference. The Examiner agreed to reconsider this rejection in light of the arguments presented at the interview.

Claims 1-5, 11, 13, 15, and 25-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Murphy in view of Peoples Jr. (U.S. 4,568,581). For the following reasons, the rejections are respectfully traversed.

The Examiner admits, in the Office action, that Murphy does not teach a preform having discrete reinforcing fibers, separate from and intimately intermixed with discrete thermoplastic fibers, and cites Peoples as teaching these claim limitations.

Furthermore, these claims were discussed at the second personal interview. At that interview, it was discussed that Peoples does not teach that the preform fibers act to substantially hold the shape of the preform. Accordingly, claims 1, 27, and 38 have been amended to recite such a feature, and are patentable over the references.

Furthermore, Peoples pertains to subject matter that is not relevant to either the invention, or the Murphy reference. Peoples pertains to molded articles suitable for use as surfaced panels (see abstract and background). This is not at all analogous to the subject matter of the invention according to amended claims 1, 27, and 38, which is pressure vessels, and Murphy, which also pertains to making pressure vessels. See MPEP §2141.01(a). The similarities and differences in structure and function of the inventions carry great weight in determining if art is analogous. See *In re Ellis*, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973). The functions of the resulting products are quite different. The products of Peoples are utilized for ornamental, non-pressurized applications. There is no teaching in the reference that the techniques of the reference can be used for making pressure vessels. The process is particularly concerned with the ability to form deep recesses and/or relief portions (see col. 2, lines 23-24). There is no suggestion of any utility for forming pressure vessels.

In contrast, the product of the invention and Murphy is to produce a vessel that can withstand and contain pressurized materials. There is no concern at all about forming recesses and/or relief portions. Accordingly, the Peoples reference is not reasonably pertinent to the problem with which the inventor (or Murphy) is concerned because a person having ordinary skill in the art of composite pressure

vessel manufacture would not reasonably have expected to solve that problem by considering a reference dealing with producing surface panels. See *In re Clay*, 966 F.2d 656, 23 USPQ2d 1058 (Fed. Cir. 1992). Accordingly, the combination is not proper, and the rejection should be withdrawn.

Furthermore, the Murphy reference makes clear that its manufacturing process includes the step of winding a yarn or tape of fiber and thermoplastic material onto a thermoplastic liner (see col. 5, lines 1-12). The reference clearly teaches that the type of tape or yarn chosen is of significant importance (see col. 5, lines 30-32). It teaches that the reinforcing fiber and thermoplastic fibers be woven into a yarn or tape prior to the winding process (see col. 5, lines 50-56). This teaches away from any suggestion to form the preform using a non-winding technique.

The Examiner argues that the motivation for substituting the Peoples process for the winding process of Murphy is that Murphy teaches a technique with "improved characteristics such as aesthetic qualities and improved strength", but it is clear from the reference that these improvements are in relation to the subject matter of the reference, i.e., surfaced panels. Thus, any "improvements" relate to improving the state-of-the-art of surface panel production. There is nothing to suggest that this so-called "improved strength" in any way is applicable to the manufacture of a pressure vessel. Furthermore, improving aesthetics is not a stated goal of either Murphy or the invention. Thus, the cited motivations would not apply to this combination, i.e., they would not motivate one skilled in the art of pressure vessel design to apply the Peoples process to pressure vessel manufacture.

Accordingly, the Examiner has failed to support a prima facie case of obviousness, and thus the rejection must be withdrawn.

Still further, claim 1 specifically recites the step of "cutting thermoplastic fibers to form a plurality of discrete thermoplastic fibers". Claims 27 and 38 recite similar cutting steps or cut fibers. The Examiner admits that Peoples does not teach such a method of forming discrete thermoplastic fibers, but states that "thermoplastic fibers are being cut in the process of Murphy *et al.* ('423) in view of Peoples, Jr. ('581). But the Examiner has failed to show any such teaching in either reference.

It is well-settled that the Examiner must show that the prior art teaches every claim limitation. The prior art references must teach or suggest *all* of the claim elements and/or claim limitations (MPEP §2143.03). Instead, the Examiner appears to be arguing that such a teaching is somehow inherent to one or both of the references. However, this is not the case. Murphy does not suggest using discrete, cut fibers. Peoples does not teach how its short fibers are obtained. They could just as well be manufactured at the length used to form the Peoples product, and thus require no cutting step. Thus, it is not inherent that there be any cutting step to form the discrete, thermoplastic fibers. Thus, claim 1, as well as claims 27 and 38, are patentable over the references even if combined. Claims 2-5, 11, 13, 15, and 25-26, which depend on claim 1, are thus patentable over the references for at least the same reasons as claim 1.

In addition, regarding claims 3-5, the claims recite separately forming various parts of the preform. The Examiner states that "making separable what can be made integral...does not appear to provide unexpected results...and [thus] does not carry patentable weight." However, such an assessment is in error.

One skilled in the art would know that making end portions that are separate from the cylindrical center portion, and assembling them in a mold, runs the risk that the resulting product is weak around the seams, and thus risking failure at those seams. The fact that the process of the claims actually leads to a vessel that is strong enough not to fail is unexpected. Thus, such a process should indeed be patentable, and thus claims 3-5 are patentable over the references for this reason as well.

Claims 6-9, 12, 27-30, and 38-42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Murphy in view of Peoples Jr. and in further view of Wiltshire (U.S. 4,101,254). Claim 10 was rejected as being unpatentable over Murphy in view of Peoples Jr. and in further view of Smith *et al.* (U.S. 4,950,439). Claim 14 was rejected as being unpatentable over Murphy in view of Peoples Jr. and in further view of Carter *et al.* (U.S. 2003/0111473). Claim 16 was rejected as being unpatentable over Murphy in view of Peoples Jr. and in further view of Sandmark (U.S. 6,582,540). Claim 17 was rejected as being unpatentable over Murphy in view of Peoples Jr. and in further view of Fernandes (U.S. 6,371,323). Claim 18 was rejected as being unpatentable over Murphy in view of Peoples Jr. and in further view of Lankheet (U.S. 6,171,423). Claim 24 was rejected as being unpatentable over Murphy in view of Peoples Jr. and in further view of Banchelin *et al.* (U.S. 5,814,268). Claims 19-20 were rejected as being unpatentable over Murphy in view of Peoples Jr. and in further view of Reyes (U.S. 6,010,411). Claims 31-32 were rejected as being unpatentable over Murphy, Peoples, Wiltshire, Carter, and Reyes. For the following reasons, the rejections are respectfully traversed.

Wiltshire, Smith, Carter, Sandmark, Fernandes, Lankheet, Reyes, and Banchelin fail to overcome the shortcomings of the combination of Murphy and Peoples. Thus, claims 6-10, 12, 14, 16, 18-20, and 24, which depend on claim 1, are thus patentable over the references for at least the same reasons as claim 1.

Claims 27 and 38, as discussed above, have similar limitations to claim 1, and thus overcome the references for the same reasons as claim 1, as do claims 28-30 and 39-42, which depend on one of claims 27 and 38.

Furthermore, the Examiner admits that neither Murphy nor Peoples teach the use of a fibrous mat, or overlapping end portions, and cites Wiltshire for such teachings. However, Wiltshire makes clear that such overlap is undesirable, and thus the reference actually teaches away from any such configurations (see col. 1, lines 31-42). Thus, there is no motivation to add such teachings and thus claims 6-7 and 12 are patentable over the references for this reason as well.

In addition, none of the Lankheet nor the Banchelin or Reyes references are relevant to the invention or the Murphy reference. Lankheet pertains to manufacturing articles that are not pressure vessels, and thus is not relevant for similar reasons discussed for Peoples. Banchelin is directed toward the process of making a golf-club shaft and Reyes to a golf-club head, and thus are clearly not relevant to making pressure vessels. Such irrelevance makes any motivation to combine unreasonable. Thus, the rejections based on these references is not proper, and thus claim 31 (as amended) and claim 32 are patentable over the references because Reyes is not a relevant reference and because there is insufficient motivation for making the various combinations that the Examiner provides.

Claims 36-37 were rejected under 35 U.S.C. §103(a) as being unpatentable over Murphy in view of Wiltshire (U.S. 4,101,254). For the following reasons, the rejection is respectfully traversed.

As discussed at the personal interview, Murphy is a patent that is assigned to the assignee of the current application. Thus, Murphy and the application are co-owned. Furthermore, Murphy lists different inventors than the current case (thus invented "by another"). In addition, claim 36, as amended, is supported by the priority document, which was filed on February 23, 2001. Accordingly, Murphy is a 35 U.S.C. §102(e) prior art reference, because it was not patented prior to the instant invention (and thus not prior art under §102(a)--see declaration for assertion of prior inventorship, included with this response). Furthermore, Murphy was not published or patented more than one year prior to the filing date of the priority document of this instant application (and thus Murphy not prior art under §102(b)). Consequently, under 35 U.S.C. §103(c), Murphy cannot be used to support a rejection for obviousness, and hence the rejection cannot stand and thus claim 36 is patentable over the references.

Claim 37 depends on claim 36, and thus is patentable over the references for at least the same reasons. New claim 42 is similarly situated as claim 36, and thus is also patentable over the references.

Finally, as discussed above, the Examiner has not provided the proper motivation for combining the references. The burden is on the Examiner to make a prima facie case of obviousness (MPEP § 2142). To support a prima facie case of obviousness, the Examiner must show that there is some *suggestion* or *motivation* to modify the reference (MPEP § 2143.01). The mere fact that references *can* be



combined or modified, alone, is not sufficient to establish prima facie obviousness (*Id.*). The prior art must also suggest the *desirability* of the combination (*Id.*). The fact that the claimed invention is within the *capabilities* of one of ordinary skill in the art is not sufficient, by itself, to establish prima facie obviousness (*Id.*).

Merely listing an advantage or benefit of the combination is not sufficient, as some rationale for combining the references must be found in the references themselves, or drawn from a convincing line of reasoning based on established scientific principles practiced by one skilled in the art that some advantage or beneficial result would be produced by the combination (MPEP §2144). Such motivation cannot be found in the application itself, as such hindsight is impermissible; the facts must be gleaned from the prior art. (MPEP §2142, last paragraph).

“To reach a proper determination under 35 U.S.C. 103, the Examiner must step backward in time and into the shoes worn by the hypothetical ‘person of ordinary skill in the art’ when the invention was unknown and just before it was made [and] the Examiner must then make a determination whether the claimed invention ‘as a whole’ would have been obvious at that time to that person.” (MPEP §2142, emphasis added). It is not proper to merely combine various elements from various references. The invention must be obvious “as a whole,” not as a piecemeal combination of elements from various references.

Accordingly, the rejections for obviousness are not supported by the Office Action and thus the rejection is improper, and should be withdrawn.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 32285.

Respectfully submitted,  
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